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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,622	11/05/2001	Harry G. Skinner	42390.P12619	4697

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EXAMINER

NORRIS, JEREMY C

ART UNIT PAPER NUMBER

2827

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/991,622

Applicant(s)

SKINNER ET AL.

Examiner

Jeremy C. Norris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not). Applicants have used the number twelve (12) twice and additionally used the number eighteen (18) twice.

Misnumbered claims 12-30 been renumbered 13-32.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9, 15-23, and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,430,933 (hereafter Marx).

Marx discloses, referring to 4, a substrate having edges, the substrate comprising: at least one ground layer (70); at least one power layer (14); and at least one conductive plate (43) adjacent to the edges and in electrical contact with the at least one ground layer [claims 1, 15, 29], wherein the at least one conductive plate has no apertures (see col. 3, line 65 – col. 4, line 10) [claims 2, 16, 30], wherein the

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substrate supports an integrated circuit die (not shown, but referred to; see col. 7, lines 50-60) [claims 3, 6, 8, 17, 20, 22], wherein the substrate is a printed circuit board (see col. 7, lines 55-60) [claims 4, 7, 9, 18, 21, 23], wherein the at least one conductive plate, the at least one ground layer, and the at least one power layer in combination define an enclosure to substantially contain electromagnetic radiation from a source within the defined enclosure (see col. 3, lines 5-15) [claims 5, 19, 31].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10-14, 24-28, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marx, in view of US 5,315,069 (hereafter Gebara).

Regarding claims 10, 24, and 32, Marx discloses the claimed invention as described above, except Marx does not specifically disclose forming a ground ring in the same layer as the power plane and surrounding the power plane. However, it would have been obvious, to one having ordinary skill in the art, at the time of invention, to form a ground ring around the power plane in Marx since Gebara teaches surrounding a power plane in a PCB with a ground ring (see Gebara figure 5; col. 6, line 45 – col. 7, line 20). The motivation for doing so would have been to form a more electromagnetic shield (see Gebara col. 7, lines 15-20). Furthermore, it would have been additionally obvious to one of ordinary skill at the time the claimed invention was made to electrically connect the ground ring taught by Gebara to the conductive plate since Marx teaches electrically connecting all ground layers, including the internal layers and the edge shielding. The motivation for doing so would have been to ensure that all ground planes have a more constant non-varying potential, thus making the device more reliable (see Marx col. 3, lines 50-60).

Additionally, it is clear that the modified invention of Marx discloses wherein the at least one conductive plate has no apertures (see col. 3, line 65 – col. 4, line 10) [claims 11, 25], wherein the substrate supports an integrated circuit die (not shown, but

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referred to; see col. 7, lines 50-60) [claims 12, 26], wherein the substrate is a printed circuit board (see col. 7, lines 55-60) [claims 13, 27], wherein the at least one conductive plate, the at least one ground layer, and the at least one power layer in combination define an enclosure to substantially contain electromagnetic radiation from a source within the defined enclosure (see col. 3, lines 5-15) [claims 14, 28].

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,237,204	Val,
US 5,500,789	Miller et al.,
US 5,586,011	Alexander.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Tuesday - Friday, 10am - 7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-308-0725.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JCSN

*David A. Zandee*  
David A. Zandee  
Primary Examiner  
2/16/7